3rd Satellite-Based Navigation User Forum
Summary

The Federal Aviation Administration (FAA) is moving towards a satellite-based navigation system and re-evaluating plans to transition from the existing ground-based navigation and landing system to a satellite-based navigation (SatNav) infrastructure.

- In January 1998, the FAA's Joint Resources Council (JRC) approved the SatNav Acquisition Program Baselines for the Wide Area Augmentation System (WAAS) and Local Area Augmentation System (LAAS) programs.
- An Investment Analysis Team (IAT) was convened at the direction of FAA senior management to examine various SatNav alternatives and recommend a navigation system architecture and funding profile for FAA-approved navigation services.

The third and final SatNav User Forum was held on July 7th 1999. Over 100 people attended including representatives from major air carriers, general and business aviation, airports and local aviation groups, avionics manufacturers, and the general public. After the general session, follow-up meetings with the SatNav IAT were held to allow for more detailed small group discussions. The Forum goals were to:

- Continue to engage the user community in the SatNav investment analysis process
- Provide a plan for the user and industry to help validate costs, benefits, and risk for the SatNav business case
- Provide an update on the investment analysis – scope, schedule, progress, and work remaining
- Provide attendees an opportunity to review the IAT's candidate alternatives.

The investment analysis recommendation will be presented to FAA senior management for approval in the late summer of 1999.

Presentation Topics of Discussion

Economic Analysis… The forum provided an opportunity to review the status of the investment analysis and to review preliminary data that will be used in the economic analysis. Underlying assumptions, the results of cost and equipage surveys of the user groups – General Aviation, Regional Aviation, and Large Air Carriers – were reviewed. The underlying benefit categories, assumptions, and data gathered were also discussed as was the methodology used to complete the economic analysis.

Cost Analysis… The Cost Team's task is to perform a life-cycle cost analysis and economic comparison of the SatNav alternatives, providing a breakout of both FAA and user costs for the period 2000 to 2020. Using data collected from avionics vendors and input from user groups, the Cost Team made estimates of equipage rates and costs for the different user groups. The core SatNav IAT is in the process of reviewing the initial cost data and has identified several areas where data appears inconsistent. Assistance was requested from Forum participants to resolve the inconsistencies.

Benefits Analysis… The Benefits Team's task is to perform an analysis of the life-cycle benefits derived for the alternatives. Both incremental benefits (those based solely on the application of SatNav technology) and strategic benefits (where SatNav technology is combined with or enables other technology to yield benefits) were considered. Initial benefits have been collected from ATA, AOPA, RAA, Boeing, and others. The Team discussed the benefit categories being considered, underlying

assumptions, summaries of the data received from the user and manufacturing communities, and what is expected to be presented to the JRC.

Candidate Alternatives… Alternatives under consideration by the IAT were also discussed. The alternatives range from no satellite augmentation (GPS only) to a full complement of GPS, WAAS, and LAAS with varying levels of ground-based navigation aids to provide a redundant service. The factors that will influence the decision were reviewed, including – affordability, the risk that many users might not equip with satellite navigation, the need for a plan that can adapt to planned GPS modernization activities, and the risk to GPS from interference.

More information about the SatNav program is available on the ASD web site at www.faa.gov/asd.